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CS 151

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## Project Documentation

### **Project Introduction:**

An application that allows the user to shop for various grocery items from their preferred local grocery stores and outlets.

### **Objective:**

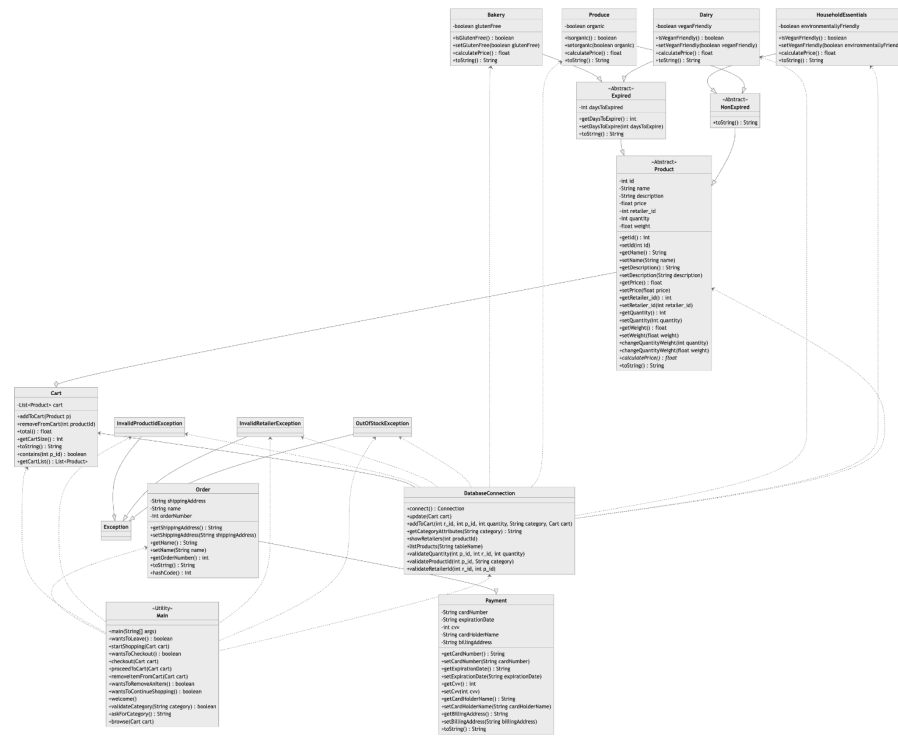
The objective of this project is to use key object-oriented concepts of inheritance, encapsulation, polymorphism, and abstraction in the programming language Java to create an application that allows users to purchase various grocery items from nearby grocery stores and outlets.

### **Project High-Level Design:**

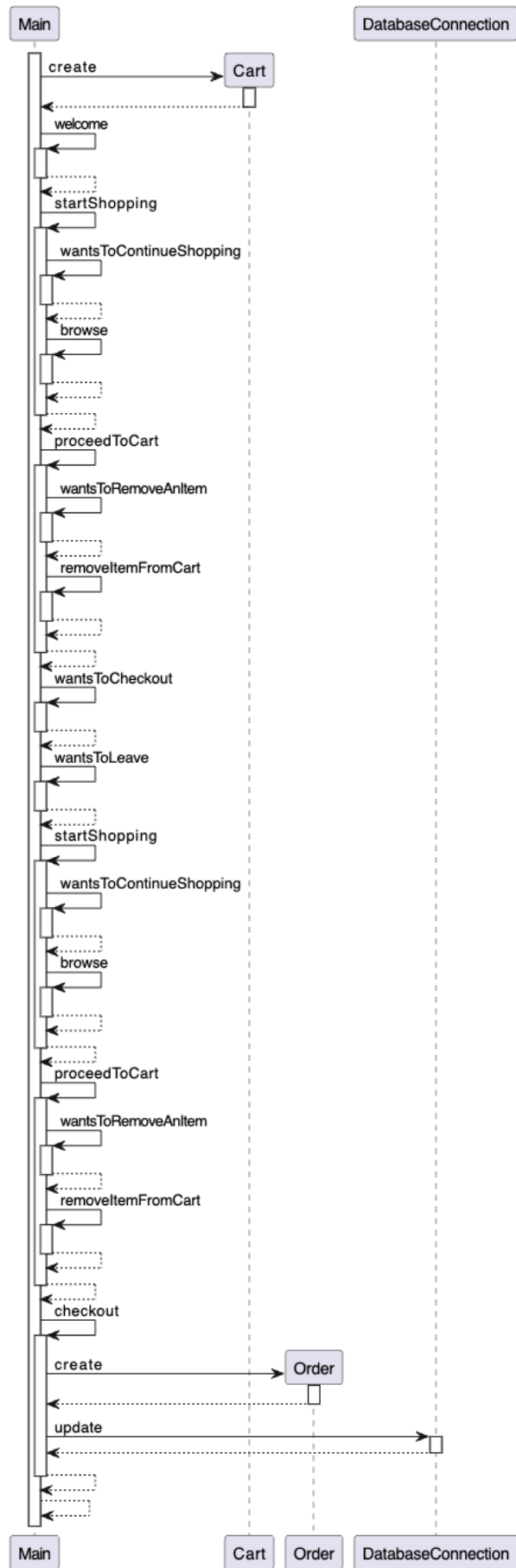
This application starts to run from the **Main.java**, which calls methods such as **browse()** and **startShopping()**. These two functions utilize the other helper methods that allow the user to add and remove items from the shopping cart, checkout, place an order, or exit the application.

During each phase of the program, such as browsing the menu, adding to the cart, and placing an order, the database `inventory.db` is queried to display the requested information by the user. This is done in the **DatabaseConnection.java** class, which connects to **sqlite3** and queries and updates the database.

### UML Diagram:



## Sequence Diagram:



## Demonstrations of key functionalities:

```
pandu@Pandus-MacBook-Pro CS151_project-main % java -classpath out/production/CS151_project:src/Inventory/sqlite-jdbc-3.45.3.0.jar:src/Inventory/slf4j-api-2.0.13.jar:src/Inventory/slf4j-simple-2.0.7.jar Main
HIIII!!
Welcome to the Grocery Marketplace! :)

What category of Products would you like to browse today?

Categories:
 1. Dairy
 2. Bakery
 3. House Hold
 4. Produce

Enter the Category Name you want to browse exactly as you see it in the list: Bkery

!!Please enter a valid category!!

What category of Products would you like to browse today?

Categories:
 1. Dairy
 2. Bakery
 3. House Hold
 4. Produce

Enter the Category Name you want to browse exactly as you see it in the list: Bakery

Understood! ;)

Bakery Products:
-ID-      -Name-      -Description-      -Price-
 3        Bread      Whole grain bread      3.99
 4        Cake       Chocolate cske       20.00
 11       Donut       Glazed donut         1.50
 12       Bagel       Whole grain bagel     1.00

Which Product would you like to purchase?
Enter id of Product exactly: 12

Understood! ;)

Retailers selling the item:
-ID-      -Name-      -City-      -Product name-      -Quantity Available-
 5        Harvest Haven      Milpitas      Bagel      7
 6        Dietary Depot      Union City      Bagel      9
 7        Bountiful Basket      Sunnyvale      Bagel      13
 8        House of Bagels      San Jose      Bagel      28

Enter the ID of the retailer you would like to purchase from: 8

Enter how many would you like to purchase: 3

Understood! ;)

Adding them to cart!

The following items have been added to cart!
```

```
The following items have been added to cart!

Product
name: Bagel
  id: 12
  Description: Whole grain bagel
  Price: $3.00
  Quantity: 3
  Days To Expire: 10      Gluten Free: Yes
Cart Total: 3.0

Would you like to continue shopping? [Type: Yes/No]: No

Let's get you checked out!

Here's the list of items in your cart:

Product
name: Bagel
  id: 12
  Description: Whole grain bagel
  Price: $3.00
  Quantity: 3
  Days To Expire: 10      Gluten Free: Yes
Cart Total: 3.0

Would you like to remove a Product from Cart? [Type: Yes/No (Enter Exactly!)): No

Would you like to checkout? [Type: Yes/No]: Yes

Let's proceed to checkout!

Please enter billing information below
Credit Card Number: 1234567890
Expiry date: 12/12
CVV: 123
Card Holder Name: Pandu Rupanagudi
Billing Address: 2000 Estate Street, San Jose, CA 90094
Shipping Address: 2000 Estate Street, San Jose, CA 90094
Recipient's Name: Neeraj P.

Order Number: 450436428
Name: Neeraj P.
Shipping Address: 2000 Estate Street, San Jose, CA 90094
Payment info:
  Card Number: 1234567890
  Expiration Date: 12/12
  CVV: 123
  Cardholder Name: Pandu Rupanagudi
  Billing Address: 2000 Estate Street, San Jose, CA 90094

Order has been place!

Inventory Updated!

Cya :)
pandu@Pandus-MacBook-Pro CS151_project-main %
```

**Contribution/Work done by each team member:**

**Singaram:** Created the classes Product, Expired, NonExpired, Dairy, Produce, Bakery, HouseholdEssentials, Order, Payment classes, and the UML/Sequence diagrams. Also worked on the slideshow presentation and project documentation.

**Manmohanbabu:** Created the DatabaseConnection, Custom Exceptions, and Main classes along with the Inventory database and integrated it with sqlite3 and other classes in the program. Also worked on the slideshow presentation and project documentation.